Disponible en ligne sur
ScienceDirect
www.sciencedirect.com
Elsevier Masson France
EM|consulte
www.em-consulte.com

CORONAVIRUS: OPINION OF THE FRENCH NATIONAL ACADEMY OF MEDICINE

Should pregnant women be vaccinated against Covid-19?[1]*

One year after the start of the Covid-19 pandemic, the knowledge of this infection in pregnant women is still fragmentary. The transmission of SARS-CoV-2 appears to be rare and with no consequences by the intrauterine route; it has not been demonstrated through the breast milk [1]. After birth, mother-to-child transmission remains unlikely provided that barrier measures (mask and hydroalcoholic gel) are properly applied.

However, although pregnancy is not yet unanimously considered to be a serious factor, several data suggest an increased risk. A study by the Centers for Disease Control and Prevention (CDC) of more than 450,000 women with symptomatic Covid-19 shows that the rate of admission to intensive care units, invasive ventilation, extracorporeal membrane oxygenation and death is higher in pregnant women than in non-pregnant women of childbearing age. In addition, Covid-19 multiplies the risk of premature delivery by three [2]. Moreover, factors classically associated with maternal morbidity, such as age over 35 years, overweight, obesity, hypertension and diabetes, expose women with Covid-19 to more severe forms [3]. Considering these risks, should vaccination against Covid-19 be recommended to pregnant women?

There are no contraindications to the administration of vaccines during pregnancy, with the exception of live vaccines such as B.C.G. and attenuated viruses (measles, mumps, rubella, chickenpox, yellow fever). On the other hand, some vaccinations are particularly recommended for pregnant women, particularly against influenza and pertussis [4]. The same arguments can be made for Covid-19: when infection, whether symptomatic or asymptomatic, occurs during pregnancy, maternal IgG antibodies against CoV-2-SRAS are transferred across the placenta; their concentration in cord blood correlates with the concentration of antibodies in the mother and the time between the onset of infection and delivery. This transplacental passage of specific antibodies of maternal origin induces protection of the newborn against SARS-CoV-2 infection [5].

Efficacy and safety data in pregnant women are still partial for the three vaccines currently licensed , whether they use the messenger RNA (Comirnaty® from Pfizer/BioNTech and COVID-19 Vaccine Moderna®) or a non-replicating viral vector (COVID-19 Vaccine AstraZeneca®). Although no serious adverse events have been reported to date, these data need to be clarified by further clinical trials. However, animal studies have not revealed any adverse effects on gestation, fetal and post-natal development or fertility. For this reason, WHO authorizes vaccination against Covid-19 for pregnant women belonging to a group in which this vaccination is recommended.

In the current context of progressive supply of vaccine doses, aware of the current difficulties of prioritizing the subjects to be vaccinated, the **National Academy of Medicine recommends**:

- to consider pregnancy as a serious risk factor in case of SARS-CoV-2 infection and to protect each pregnant woman from any potential source of contamination;

[1] DOI of original article: 10.1016/j.banm.2021.03.002
* Press release from the French National Academy of Medicine, March 2, 2021

- to vaccinate any professionally or family-exposed pregnant woman, or carrying a co-morbidity (age >35 years, BMI >25, hypertension, diabetes);
- not to delay or interrupt a pregnancy because of the vaccination;
- to preserve breastfeeding by women who have been infected with SARS-CoV2 or vaccinated during their pregnancy, as the antibodies transmitted by breast milk have a protective effect on the newborn.

References

[1] Académie nationale de médecine. Allaitement et Covid-19. Communiqué de l'Académie nationale de médecine, 8 septembre 2020. Bull Acad Natl Med, 2020;204:949-50.

[2] Rasmussen SA, Jamieson DJ. Pregnancy, postpartum care, and Covid-19 vaccination in 2021. JAMA 2021 Feb 8.

[3] Sentilhes L et al. Coronavirus disease 2019 in pregnancy was associated with maternal morbidity and preterm birth. Am J Obstet Gynecol 2020 ; 223: 914. e1-15.

[4] Yves BUISSON, Pierre BÉGUÉ, Emmanuel GRIMPREL (rapporteurs) au nom de la Commission VII (maladies infectieuses et tropicales) de l'Académie nationale de médecine. Il faut vacciner les femmes enceintes contre la grippe et contre la coqueluche par Rapport de l'Académie nationale de médecine (à paraître dans Bull Acad Natl Med; 205(6)).

[5] Flannery DD et al. Assessment of Maternal and Neonatal Cord Blood SARS-CoV-2 Antibodies and Placental Transfer Ratios. JAMA Pediatr 2021: e210038.

Disclosure of interest

The authors declare that they have no competing interest.